

AMENDMENT TO THE CLAIMS:

The following listing of claims replaces all prior versions and listings of claims in the present application.

Listing of Claims:

Claim 1. (Currently Amended) A vehicular alternator comprising a rotor and a stator constituted by coiling stator windings over a stator core, wherein:

said rotor comprises a pair of claw-type magnetic poles arranged in an opposed relation, permanent magnets having rectangular lateral surfaces[[],] which face in a circumferential direction of the rotor and form magnetic pole surfaces, disposed between and in contact with opposing lateral surfaces of adjacent claws of said pair of claw-type magnetic poles, and field windings coiled radially inward of said plurality of claws; and

the opposing lateral surfaces of said claws adjacent said permanent magnets are formed into substantially the same rectangular shape as the magnetic pole surfaces with which they are in contact, such that said lateral surfaces of said claws are in contact with the whole of the rectangular lateral magnetic pole surfaces of said permanent magnets.

Claim 2. (Currently Amended) A vehicular alternator according to Claim 1, wherein each of said plurality of claws has an auxiliary magnetic pole portion which contacts the whole of the magnetic pole surface of said permanent magnet, and has a surface which has a shape that differs from a shape of an axial cross section of a circumferentially central portion of said claw.

Claim 3. (Previously Presented) A vehicular alternator according to Claim 2, wherein said auxiliary magnetic pole portion is formed to have a greater thickness at a radially outer portion than at a radially inner portion thereof.

Claim 4. (Previously Presented) A vehicular alternator according to Claim 1, wherein each of said plurality of claws is formed such that a radially inner surface of each claw is substantially parallel to a radially outer surface thereof.

Claim 5. (Original) A vehicular alternator according to Claim 4, wherein said plurality of claws are interconnected by a substantially ring-shaped coupling member.

Claim 6. (Previously Presented) A vehicle alternator according to Claim 1, wherein each of said plurality of claws has a magnet holding portion for holding said permanent magnet.

Claims 7.-8. (Cancelled)

Claim 9. (Previously Presented) A vehicular alternator according to Claim 1, wherein a protective member is disposed at least on an outer side of said permanent magnet in the radial direction of said rotor.

Claim 10. (New) A vehicular alternator comprising a rotor and a stator constituted by coiling stator windings over a stator core, wherein:

said rotor comprises a pair of claw-type magnetic poles arranged in an opposed relation, permanent magnets having rectangular lateral surfaces which face in a circumferential direction of the rotor and form magnetic pole surfaces, disposed between and in contact with opposing lateral surfaces of adjacent claws of said pair of claw-type magnetic poles, and field windings coiled radially inward of said plurality of claws;

a circumferentially central portion of each of said claws is tapered toward a tip of each respective claw, such that said circumferentially central portion has a substantially triangular or trapezoidal shape in a radial section plane along an axial direction of the rotor;

each of said claws has auxiliary magnetic pole portions formed at circumferentially lateral ends thereof, which auxiliary magnetic pole portions form the opposing lateral surfaces of said claws adjacent said permanent magnets, and have substantially the same rectangular shape as the magnetic pole surfaces with which they are in contact, such that said lateral surfaces of said claws are in contact with the whole of the magnetic pole surfaces of said permanent magnets.

Claim 11. (New) A vehicular alternator having a stator including a stator core and stator windings coiled over the stator core, and a rotor provided to rotate in a circumferential direction relative to the stator, with gaps separating said rotor and stator, wherein said rotor comprises:

a pair of claw-type magnetic poles arranged in an opposed relation;

field windings coiled with the claw-type magnetic poles; and

a plurality of permanent magnets provided to said claw-type magnetic poles; wherein,

each of said claw-type magnetic poles has a plurality of claws;

claws of one of the pair of the claw-type magnetic poles and claws of the other of the pair of the claw-type magnetic poles are disposed alternately in said circumferential direction of said rotor;

each of the claws has lateral surfaces which face in substantially opposed directions circumferentially of said rotor;

said permanent magnets are interposed between said claws adjacent to each other in said circumferential direction of said rotor, respectively;

each of said permanent magnets interposed between said respective adjacent claws has lateral surfaces which face in opposed directions circumferentially of said rotor;

said permanent magnets are interposed between adjacent claws such that each of the lateral surfaces of the permanent magnets faces a corresponding one of the lateral surfaces of the claws in an opposed relation while each of the lateral surfaces of the permanent magnets provides a magnetic pole surface; and

a whole area of the magnetic pole surface of each of the permanent magnets physically contacts with said lateral surface of each of the claws so as to magnetically connected therewith.

Claim 12. (New) The alternator according to Claim 11, wherein:

a circumferentially central portion of each of said claws is tapered toward a tip of each respective claw, such that said circumferentially central portion has a substantially trapezoidal or triangular shape in a radial section plane along an axial direction of said rotor;

said lateral surfaces of said permanent magnets have a substantially rectangular shape; and

each of said claws has auxiliary magnetic pole portions formed at circumferentially lateral ends thereof, which auxiliary magnetic pole portions form said lateral surfaces of said claws, and have substantially the same rectangular shape as said lateral surfaces of said permanent magnets.